REMARKS

Reconsideration of the rejections set forth in the Office Action is respectfully requested. By this amendment claim 15 has been amended. Currently, claims 1-5, 8-24, and 27 are pending in this application.

Amendment to claim 15

Applicants noticed an antecedent basis issue in claim 15 and have amended claim 15 accordingly. This amendment is not substantive and is not intended to change the scope of the claim. Rather, this amendment simply provides clarification and conforms claim 15 to the requirements of 35 USC 112, second paragraph. The Examiner is respectfully requested to enter this amendment when acting on this application.

Rejection under 35 USC 112, first paragraph

Claims 13 and 23 were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement.

With respect to claim 13, the Examiner indicated that the recitation of "turn off the inter-mesh communication point when the battery level of the vehicle drops below a threshold value" was not supported by the specification.

On page 22, applicants discuss that the power provision and regulation section includes a power monitor configured to monitor the available power level from the 12 Volt DC interface to the vehicle. (Specification at page 22, lines 5-6). As discussed later in that paragraph, after the motor has been shut off, power received through the 12 Volt DC interface will be drawn from the vehicle battery. (Specification at page 22, lines 12-13). The power monitor monitors the voltage, current, or other quantity at the interface to prevent the vehicle battery from being drained excessively. (Specification at page 22, lines 13-16). In the next paragraph, applicants explain that "A switch 128 is connected between the 12 Volt DC interface and the power supply unit... The switch is under the control of the power monitor and used to disconnect the power supply unit from the 12 volt interface in the event it appears that the vehicle battery may have reached a point where the inter-mesh communication point should cease drawing power out of it."

Applicants respectfully submit that this portion of the specification provides support for the portion of claim 13 cited by the Examiner. Although this portion of the specification does not explicitly use the word "threshold" it recites the phrase "a point" which conveys the same meaning. Accordingly, applicants respectfully request that the rejection of claim 13 under 35 USC 112, first paragraph be withdrawn.

With respect to claim 23, the Examiner stated that the limitation "compensating an owner of a vehicle containing the first mobile inter-mesh communication point for permitting the first mobile inter-mesh communication point to transit onto the first mesh networking level the data received from the second mesh-networking level" was not supported by the specification.

At page 14, lines 18-21, applicants explain that "Vehicle owners may be given incentives to install an inter-mesh communication point in any number of ways. For example, the owner of the network may offer vehicle owners free or reduced price access to the higher bandwidth network resources, or may credit their account, or pay them based on the amount of traffic handled by their inter-mesh communication point..." Since one of the ways that an inter-mesh communication point "handles" traffic is by transmitting onto the first mesh networking level the data received from the second mesh networking level, applicants respectfully submit that this portion of the specification provides support for the amendments to claim 23. Accordingly, the applicants respectfully request the Examiner to withdraw the rejection of claim 23 under 35 USC 112, first paragraph.

Rejection under 35 USC 102 over Garahi

Claims 1-5, 8-24, and 27 were rejected under 35 USC 102 as anticipated by Garahi, et al. (U.S. Patent Publication No. 2003/0091010). This rejection is respectfully traversed in view of the amendments to the claims and the following arguments.

This application relates to a mobile inter-mesh communication point that is configured to operate on two wireless mesh networks. Applicants proposed in this application to use a first level mesh network for a backhaul network and to use a second level mesh network for the access network. Applicants also proposed to allow the inter-mesh communication points to be mobile, so that the ad-hoc backhaul mesh network could follow the traffic as people moved from place to place. After reviewing Garahi, it appears to applicants that Garahi did not teach or suggest the use of the IAPs as inter-mesh communication points. Rather, the IAPs in Garahi participated along with the user terminals in a single level mesh network.

Inter-mesh communication points

In the Response to Arguments section of the Office Action, on page 8, the Examiner acknowledged that applicants presented arguments in the last Amendment (Amendment dated August 29, 2007) that Garahi did not "teach or suggest the use of inter-mesh communication points." However, the Examiner has taken the position that this does not pertain to the claims as presented.

Independent claim 1 recites "A mobile inter-mesh communication point" (emphasis added). Independent claim 15 recites a method of providing a dynamically adjusting mesh network topography, comprising... enabling a mobile inter-mesh communication point to participate in the first mesh networking level; and permitting a first mobile inter-mesh communication point to transmit onto the first mesh networking level data received from a second mesh networking level implemented using at least one IEEE 802.16x standard. (emphasis added). Independent claim 27 recites a vehicle, including "An inter-mesh communication system..."

From this quick review of the claim language, it is clear that each of the independent claims explicitly recite the phrase "inter-mesh communication point". The modifier "mobile" describes the fact that the inter-mesh communication point is able to move within the mesh. However, the claims clearly recite the use of inter-mesh communication points. Thus, the Examiner is requested to consider the arguments presented in the first Amendment in view of the fact that the claims clearly provide support for these arguments.

Since the claims both recite an inter-mesh communication point, the issue to be resolved is whether Garahi teaches one mesh level or two. Applicants respectfully submit that Garahi teaches one level of mesh. Because Garahi only teaches one mesh level, the Intelligent Access Points (IAPs) of Garahi are not "inter-mesh" access points as claimed.

Garahi teaches that the mobile terminals 118 and wired IAPs form an "ad-hoc network as described in U.S. patent application Ser. No. 09/897,790." (Garahi at Par. 30). Thus, the mobile user terminals may form a first level mesh network and the IAPs may participate in the first level mesh network.

When mobile IAPs are used, Garahi teaches that the mobile IAPs communicate with the wired IAPs using either a microwave backhaul (which is a point-to-point transmission scheme) or using a "self forming self healing radio access technology as described in U.S. patent application Ser. No. 09/897,790." (Garahi at Par. 38). Note, in this regard, that Garahi references the same patent application to provide supporting details for both the first level mesh network implemented between the mobile terminals and IAP, and for the mesh network that interconnects the fixed and mobile IAPs. The natural reading of this would be that communication takes place between the mobile terminals and IAPs, and between mobile and fixed IAPs, using a unified first level mesh network. Thus, applicants respectfully submit that Garahi does not teach or suggest two levels of mesh networks, but rather implements everything using a single level mesh network.

This is consistent with Figs. 5 and 6 of Garahi. In Fig. 5, the IAP 132 is disposed in vehicle 146 (see Paragraph 37), and "operates as a router to enable intercommunication between mobile terminals 118 which can be hand-held or present in other vehicles 154, 156." (Garahi at Par. 39). Thus, in Fig. 5 the IAP is functioning as a router in the first level mesh network to allow user terminals such as handheld and car-based terminals in the first level mesh network to communicate with each other. Thus, Fig. 5 shows and describes the operation of the mobile IAP in the first level mesh network.

In connection with Fig. 6, Garahi states that "the mobile IAPs 132 can use each other in conjunction with another user terminal 118 in the ad-hoc network, such as a user terminal 118 present in a vehicle 154, to connect to a fixed IAP, such as IAP 108." Since we know that the user terminals 118 are operating in the first level mesh network, this portion of Garahi supports applicants interpretation that the fixed and mobile IAPs are likewise communicating with each other using the first level meshed network. Specifically, Fig. 6 shows the mobile network bridging communication from one mobile IAP to another mobile IAP which then forwards the communication to the fixed IAP. This shows that the mobile unit and mobile IAPs are communicating with each other using the same mesh network as that being used by the mobile terminal and, hence, that the communication that occurs between the fixed and mobile IAPs is all part of the first level mesh network.

Accordingly, applicants respectfully submit that Garahi does not teach or suggest communication two levels of mesh networks. Since there aren't two levels of mesh networking, Garahi cannot teach or suggest an "inter-mesh" communication point. Thus, applicants respectfully request that the rejection under 35 USC 102 be withdrawn.

IEEE 802.16x

In the previous Amendment, applicants presented arguments that Garahi does not teach or suggest the use of two frequency bands or the use of IEEE 802.16x. In response, the Examiner indicated that Garahi teaches that the transceivers (134-1 and 134-2) transmit and receive at any frequency band, which the Examiner contends reads on both 802.11x as well as 802.16x. Further, the Examiner has contended that the transceivers operate at two different frequencies.

It is well settled law that disclosure of a species in a reference can anticipate a claim to the genus, but that a disclosure of a genus in a reference does not necessarily anticipate a claim to the species. See MPEP 2131.02. Thus, simply finding that Garahi teaches that "any frequency band" is not sufficient to anticipate the claims which recite the use of 802.11x as well as 802.16x. Accordingly, applicants respectfully request the Examiner to withdraw the rejection.

Additionally, Garahi does not teach or suggest that the transceivers operate at two different frequencies. While Fig. 3 clearly shows an IAP with two transceivers 134-1, 134-2, and Garahi teaches in connection with Fig. 2 that transceiver 134 can transmit and receive data packets over any frequency band, Garahi also teaches that the frequency and modulation scheme used by the transceiver 134 does not impact the implementation of the mobile IAP. (Garahi at Paragraph 34). Thus, Garahi was not interested in the particular manner in which the transceiver was operating and Garahi did not teach or suggest that the two transceivers should operate using different frequency/modulation techniques. Thus, for this additional reason, applicants respectfully request that the rejection of the claims be withdrawn.

Claim 13

A second aspect of the invention relates to power management. Specifically, as described in the specification as originally filed on Page 22, lines 5-22, the mobile inter-mesh communication point may be connected to the vehicle's electrical system and draw power from the electrical system while the vehicle is running and may continue to draw power from the electrical system (car battery) once the vehicle has been turned off. To prevent the mobile inter-

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mesh access point from draining the battery of the vehicle, the access point monitors the battery level (voltage, current, and/or power) and turns the access point off to prevent the battery from being drained excessively.

Amended claim 13 recites that the mobile inter-mesh communication point has a battery discharge controller configured to monitor a battery level of the vehicle and turn off the inter-mesh communication point when the battery level of the vehicle drops below a threshold value. Garahi does not teach or suggest that the mobile IAP 132 should be able to be used when the car is turned off. Additionally, Garahi does not teach or suggest that the IAP should include a battery discharge controller as claimed. Thus, claim 13 is patentable over Garahi.

Conclusion

In view of foregoing remarks, it is respectfully submitted that the application is now in condition for allowance and an action to this effect is respectfully requested. If there are any questions or concerns regarding the amendments or these remarks, the Examiner is requested to telephone the undersigned at the telephone number listed below.

If any fees are due in connection with this filing, the Commissioner is hereby authorized to charge payment of the fees associated with this communication or credit any overpayment to Deposit Account No. 502246 (Ref: NN-16127).

Respectfully Submitted

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